

Notice of Allowability

Application No.

10/713,940

Examiner

Ramnandan Singh

Applicant(s)

DAS ET AL.

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Dec. 09, 2004 and April 21, 2005.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date Applicant's proposed corrections dated April 21, 2005.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

8. Examiner's Statement of Reasons for Allowance:


This invention relates to an apparatus and method for detecting both voice and tones in a telephone line using Goertzel filters. Claim 1 identifies the uniquely distinct feature of the apparatus comprising: a plurality of Goertzel filters each operating at a different frequency within a voice range, some of the filters operating at frequencies of control signals and others of the filters ^{operating} operating at frequencies other than the control signals' frequencies, each filter for receiving a signal to be analyzed for presence of voice and detecting energy of the signal at the operating frequency of the filter; and a comparator connected to the filters, for comparing the energies detected by the filters against thresholds and responsive to at least three of the filters simultaneously detecting energy above a noise threshold and below a control signal threshold by indicating that the signal comprises voice. While the closest prior art, Prabhu et al [US 20020076034 A1] teach detecting the presence of voice from the absence of detection of control signals or silence, they do not detect the presence of voice by means of at least three of the Goertzel filters simultaneously detecting energy above a noise threshold and below a control signal threshold. As such, the prior art fails to anticipate or render the above underlined limitation obvious. Therefore, Claim 1 is allowable. Claims 6, 10 and 15 are essentially similar to claim 1 and hence they are allowable.

The claims have been re-numbered as follows:

CLAIMS NUMBER (ORIGINAL)	CLAIMS NUMBER (FINAL)
1-18	1-18

Claim no. 1 along with figure number 3 will be published in the Official Gazette.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Allowance".


SINH TRAN
 SUPERVISORY PATENT EXAMINER